

Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

BOTANICAL GAZETTE

THE

BOTANICAL GAZETTE

EDITORS:

JOHN MERLE COULTER AND CHARLES REID BARNES,

WITH OTHER MEMBERS OF THE BOTANICAL STAFF
OF THE UNIVERSITY OF CHICAGO

ASSOCIATE EDITORS:

J. C. ARTHUR,

Purdue University.

CASIMIR DECANDOLLE,

Geneva.

J. B. DeToni, University of Padua.

ADOLF ENGLER,

University of Berlin.

Léon Guignard,

L'École de Pharmacie.

ROBERT A. HARPER,

University of Wisconsin.

JINZŌ MATSUMURA, Imperial University, Tōkyō. FRITZ NOLL,

University of Bonn.

VOLNEY M. SPALDING, University of Michigan.

ROLAND THAXTER,

Harvard University.

WILLIAM TRELEASE,

Missouri Botanical Garden.

H. MARSHALL WARD,

University of Cambridge.

EUGEN. WARMING,

University of Copenhagen.

VEIT WITTROCK,

Royal Academy of Sciences, Stockholm.

VOLUME XXXV
JANUARY—JUNE, 1903

WITH SEVENTEEN PLATES AND THIRTY-FOUR FIGURES IN THE TEXT

CHICAGO, ILLINOIS
PUBLISHED BY THE UNIVERSITY OF CHICAGO
1903

PRINTED AT The University of Chicago Press CHICAGO

TABLE OF CONTENTS.

Undescribed plants from Guatemala and other Central Ameri-
can republics. XXIV (with plate 1) John Donnell Smith 1
Cultures of Uredineae in 1902 J. C. Arthur 10
Experimental studies on inulase Arthur L. Dean 24
The distribution of the upland plant societies of Kent county, Michigan. Contributions from the Hull Botanical Laboratory. XLIII (with map) - Burton Edward Livingston 36
Chemical stimulation and the evolution of carbon dioxid. Contributions from the Hull Botanical Laboratory.
XLIV (with two figures) Edwin Bingham Copeland 81, 160 The genus Crataegus in Newcastle county, Delaware Charles S. Sargent 99
The genus Crataegus in Newcastle county, Delaware Charles S. Sargent 99 The Ravenelias of the United States and Mexico (with plates
II and III) William H. Long, Jr. 111
New or peculiar North American Hyphomycetes. III. Contributions from the Cryptogamic Laboratory of Harvard University. LIV (with plates IV and V) Roland Thaxter 153
The embryogeny of Zamia. Contributions from the Hull Botanical Laboratory. XLV (with plates VI-VIII) -
John M. Coulter and Charles J. Chamberlain 184
Some talus Cladonia formations (with five illustrations) - Bruce Fink 195
Oogenesis in Saprolegnia. Contributions from the Hull Botanical Laboratory. XLVI (with plates IX and X) Bradley Moore Davis 233, 320
The behavior of the chromosomes in the spore mother-cells of higher plants, and the homology of the pollen and embryo-sac mother-cells (with plates XI-XIV) - David M. Mottier 250
On the relationships of the nuclear membrane to the proto- plast. Contributions from the Hull Botanical Labora- tory. XLVII (with plate xv) Anstruther A. Lawson 305
The Macchie of the Neapolitan Coast region (with four figures) J. Y. Bergen 350, 416
Crataegus in northeastern Illinois Charles S. Sargent 377
Mitosis of the primary nucleus in Synchytrium decipiens (with plates XVI and XVII) Frank L. Stevens and Adeline C. Stevens 405
Briefer Articles—
Contributions to the biology of Rhizobia Albert Schneider 56
Chalazogamy in Carya olivaeformis (with one figure) Frederick H. Billings 124

	Selected Notes (with six	figures)	-	-	-	-	W. C. Coker	135
	The development of the	a						
	filamentosa (with five	e figures)	-		-	-	Howard S. Reed	209
	Faxonanthus		-	-	-	-	J. M. Greenman	214
	Notes on North American	n grasses (v	vith tv	wo fig	ures)	A.	S. Hitchcock 215,	283
	The morphology of spore	e-producing	mem	bers	-	-	F. O. Bower	285
	Nutation in Bidens and other genera (with four figures)							
					F	ran	k Lincoln Stevens	363
	A Minnesota species of	Tuber (with	three	figu	es)	-	Fred K. Butters	427
	A new botanical research	ı laboratory	in th	e tro	pics	-	F. A. F. C. Went	432
	New or little-known woo	dy plants	-	-	-	-	W. W. Ashe	433
Curre	ENT LITERATURE -		-	-	-	59,	139, 218, 292, 367,	437
For titles see index under author's name and Reviews.								
Papers noticed in "Notes for Students" are indexed under author's name and subjects.								
News			-	-	-	78,	150, 231, 303, 374,	447

DATES OF PUBLICATION.

No. 1, January 20; No. 2, February 24; No. 3, March 20; No. 4, April 20; No. 5, May 20; No. 6, June 20.

ERRATA.

- P. 8, line 5, for 14-jugo-pinnata read 7-14-jugo-pinnata.
- P. 16, lines 12 and 13 from below, for K. & S. read E. & K.
- P. 16, line 17, for K. & S. read E. & K.
- P. 22, line 16 from below, for K. & S. read E. & K.
- P. 76, line 8 from below, for Ceidomya read Cecidomya.
- P. 79, line 11 from below, for ataviem read atavism.
- P. 135, line 2 from below, for E. M. Berry read E. W. Berry.
- P. 203, over legend insert cut from p. 205.
- P. 205, over legend insert cut from p. 203.
- P. 218, line 2 from below, for Pflanzenatomie read Pflanzenanatomie.
- P. 229, line 10 from below, for ulva read Ulva.
- P. 284, line 10 from below, for Craspedorachis read Craspedorhachis.
- P. 297, line 22, for ovulate read ovular.